

## **Chapter 1**

### **INTRODUCTION**

The MS-6183 Micro ATX WH9 mainboard is a high-performance computer mainboard based on Intel® 810 chipset. The MS-6183 is designed for the Intel® Pentium II/III or Celeron™ processor for inexpensive business/personal desktop markets.

The Intel® 810 chipset is the first generation Integrated Graphics chipset for the Intel® Celeron™ processor. The graphics accelerator architecture consists of dedicated multi-media engines executing in parallel to deliver high performance 3D, 2D, and motion compensation video capabilities. An integrated centralized memory arbiter allocates memory bandwidth to multiple system agents to optimize system memory utilization. A new chipset component interconnect, the hub interface, is designed into the Intel 810 chipset to provide an efficient communication channel between the memory controller hub and I/O hub controller.

The Intel 810 chipset contains three core components: the Graphics and Memory Controller Hub (GMCH), the I/O Controller Hub (IHO/ICH) and the Firmware Hub (FWH). The GMCH integrates a 66/100MHz, P6 family system bus controller, integrates 2D/3D graphics accelerator, 100MHz SDRAM controller and high-speed hub interface for communication with the IHO/ICH. The IHO/ICH integrates an Ultra ATA/33(IHO) or Ultra ATA/66(ICH) controller, USB host controller, LPC interface controller, FWH interface controller, PCI interface controller, AC'97 digital controller and a hub interface for communication with the GMCH.

## **1.1 Mainboard Features**

### **CPU**

- Slot 1 for Intel® Pentium® II/III or Celeron™ processor.
- Supports 233MHz, 266MHz, 300MHz, 333MHz, 350MHz, 400MHz, 450MHz, 500MHz and faster processor.

### **Chipset**

- Intel® 810 (GMCH) chipset. (421 BGA)
  - Integrated Graphics Controller
  - Intel DDM Architecture
  - SDRAM memory Independent of System Bus
- Intel® ICH chipset. (241 BGA)
  - AC'97 Controller Integrated
  - 2 full IDE channels, up to ATA66
  - Low pin count interface for SIO

### **Front Side Bus (FSB)**

- 66/100MHz clocks are supported.

### **Main Memory**

- Support two 168-pin DIMM sockets.
- Support a maximum memory size of 256MB(64Mbit technology) or 512MB(128Mbit technology) SDRAM

### **Slots**

- One AMR(Audio Modem Riser) and one PTI(PanelLink TV-Out Interface)
- Three 32-bit Master PCI Bus slots.
- Support 3.3v/5v PCI bus Interface.

**On-Board IDE**

- An IDE controller on the ICH/ICH0 chipset provides IDE HDD/CD-ROM with PIO, Bus Master, Ultra DMA/33 and Ultra DMA/66 (ICH only) operation modes.
- Can connect up to four IDE devices.

**On-Board Peripherals**

- On-Board Peripherals include:
  - 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
  - 2 serial port (COMA + COMB)
  - 1 parallel port supports SPP/EPP/ECP mode
  - 2 USB ports and 2 USB connectors
  - 1 IrDA connector for SIR.
  - 1 VGA port

**Video**

- GMCH chip integrated
- 2D/3D Graphics
- Onboard 4MB Display Cache (optional)

**Audio**

- ICH chip integrated
- Creative® ES1373 (optional)
  - Running on PCI BUS.
  - Support Direct Sound and Direct Sound 3D
  - AC97' Compliant

**BIOS**

- The mainboard BIOS provides “Plug & Play” BIOS which detects the peripheral devices and expansion cards of the board automatically.
- The mainboard provides a Desktop Management Interface(DMI) function which records your mainboard specifications

**Dimension**

- Micro ATX Form Factor

**Mounting**

- 6 mounting holes.

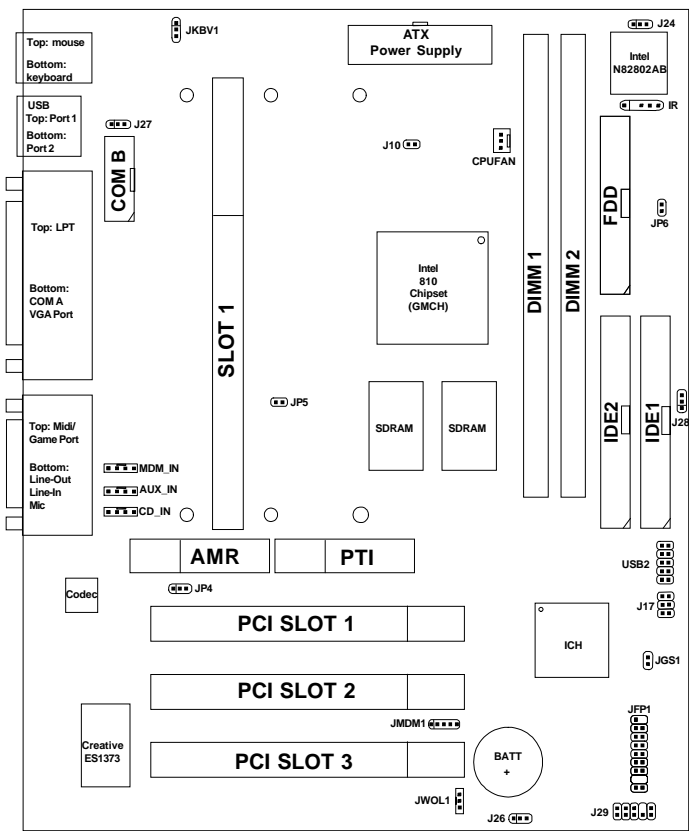
**System Hardware Monitor**

- CPU Fan Revolution Detect
- CPU Fan Control (the fan will automatically stop when the system enters suspend mode)
- System Voltage Detect
- CPU Overheat Warning.
- Display Actual Current Voltage

**Other Features**

- Keyboard Password Wake-Up (reserved)
- LAN Wake-Up
- Internal/External Modem Wake-Up

1.2 Mainboard Layout



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